

CLAIMS

What is claimed is:

- 5 1. A lifter comprising:
- at least two side support brackets each said bracket comprising an upper end and a
- lower end;
- at least one cross support beam comprising an adjustable length and opposing ends,
- said cross support beam connectedly disposed to said side support brackets;
- a plurality of lifting mechanisms; and
- a power source connected to said transmission shaft capable of applying
- torque to said shaft.
2. The lifter of claim 1 wherein each said cross support beam is in proximate relationship
- with said upper end of two said side support brackets.
3. The lifter of claim 1 wherein said at least one cross support beam is disposed in a
- perpendicular relationship to said side support brackets.
- 20 4. The lifter of claim 1 wherein a height of said support brackets is adjustable.
5. The lifter of claim 1 wherein a length of said transmission shaft is adjustable.
6. The lifter of claim 1 comprising six brackets.
- 25 7. The lifter of claim 5 comprising three cross support beams.

8. The lifter of claim 1 wherein said support bracket additionally comprises a clamp for attachment to a surface.

5 9. The lifter of claim 1 wherein said support bracket additionally comprises a leg extension to extend below an upper surface of a frame.

10. The lifter of claim 1 wherein said side support brackets additionally comprise a support foot attached to and adjacent said lower end of said support brackets.

10 11. The lifter of claim 1 additionally comprising side support beams attached in perpendicular planar configuration with said brackets.

12. The lifter of claim 11 wherein said side support beams are adjustably connected to said brackets wherein said overall length of said lifter is thereby adjustable.

15 13. The lifter of claim 1 wherein said side support brackets comprise an upper assembly having a support frame opening provided for inserting said cross beams therethrough.

20 14. The lifter of claim 13 wherein said brackets additionally comprise upper and lower crossbeam guides adjacent said opening.

15. The lifter of claim 13 additionally comprising a side support bracket brace having a side support frame hole for receipt of a crossbeam table width adjustment pin.

25 16. The lifter of claim 15 wherein said cross support beams comprise a plurality of adjustment holes disposed near each of said opposing ends for receipt of said crossbeam table width adjustment pin.

17. The lifter of claim 1 wherein said cross support beams and said side support brackets are foldable in a storage configuration.

18. The lifter of claim 1 wherein said lifting mechanism comprises:

at least one winch;

a transmission shaft disposed through each winch;

a plurality of pulleys;

at least one cable having opposing ends; and

at least one hook attached to said end of said cable.

19. The lifter of claim 18 wherein said transmission shaft is non-circular.

20. The lifter of claim 18 wherein said pulleys are drop pulleys.

21. The lifter of claim 18 additionally wherein said hook is a spring loaded hook.

22. The lifter of claim 18 wherein said winch is disposed at an approximate midpoint of each said cross support beam.

23. The lifter of claim 22 wherein said plurality of pulleys are disposed at points on said cross support beams interposed between said midpoint of said cross support beams and a point of intersection of said cross support beams and said support brackets.

24. The lifter of claim 23 wherein at least two pulleys are disposed on each said cross support beam.

25. The lifter of claim 18 wherein said at least one cable is disposed through said at least one winch and at least one pulley.

26. The lifter of claim 18 wherein said transmission shaft comprises a near end connected to said power source.

5 27. The lifter of claim 18 wherein said power source for torquing said shaft is selected from the group consisting of a motor and a manually generated force.

28. The lifter of claim 18 further comprising:
a worm gear disposed at a near end of said power transmission shaft;
10 a noncircular bore formed in said worm gear, said bore attachable to said transmission shaft in a manner to provide transfer of torque to said shaft;
a worm;
a crank handle having a crank end and a connection end, said handle attached to said worm at said connection end;
15 said worm positioned in relationship to said worm gear to transfer torque from said crank handle to said worm gear.

29. The lifter of claim 18 wherein said winch comprises a double drum winch.

20 30. The lifter of claim 18 wherein one winch disposed nearest said power source comprises a master winch.

31. The lifter of claim 18 wherein said winch has an internal mechanism preventing reverse movement of said cable without engaging a manual release switch.

25 32. A combination of a pool table and a lifter wherein said lifter comprises side support brackets having a lower end, said lower end having a bottom surface wherein said bottom surface rests on an upper edge of a cabinet frame of said pool table.

33. The combination of claim 32 wherein said pool table additionally comprises pockets and said lifter additionally comprises hooks disposed in relation to said pockets.

5 34. The combination of claim 32 wherein said side support brackets additionally comprise a leg extension wherein said side support bracket length is extended below said upper edge of said pool table.

10 35. The combination of claim 32 wherein said side support brackets additionally comprise a clamp.

15 36. A method of operating a slate lifter comprising the steps of:
providing a lifter comprising a lifting mechanism and side support brackets with a bottom surface and beams and placing the bottom surface of the side support brackets on an upper edge of a pool table cabinet;
fixing the beams and brackets in place;
attaching slate hooks under a bottom surface edge of the slate in relationship with pockets provided in an upper surface of the table, the hooks placed on opposing sides of the slate and spaced equidistantly from an edge perpendicular to
20 sides of the slate;
applying a torque force to the lifting mechanism; and
lifting the slate above the pool table.

25 37. The method of claim 36 additionally comprising the steps of:
adjusting a height of the side support brackets;
adjusting a length of a power transmission shaft; and
adjusting a length of cross support beams.

38. The method of claim 36 wherein said lifting mechanism comprises at least one winch, a transmission shaft, and at least one cable, and a plurality of hooks.

39. The method of claim 38 wherein said lifting mechanism additionally comprises a plurality
5 of pulleys.

40. The method of claim 38 additionally comprising the step of transferring a torque from the shaft to a master winch and at least one slave winch contemporaneously to provide synchronous movement.

41. The method of claim 38 additionally comprising the step of winching a cable attached to the slate hooks and threaded through the winch and pulleys to either raise or lower the slate.